



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/361,118	07/27/1999	HISASHI WATANABE	Q55086	5143

7590 11/29/2001

SUGHRUE MION ZINN MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE
WASHINGTON, DC 200373213

EXAMINER

FIORILLA, CHRISTOPHER A

17

ART UNIT	PAPER NUMBER
----------	--------------

1731

DATE MAILED: 11/29/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/361,118

Applicant(s)

WATANABE ET AL.

Examiner

Christopher A. Fiorilla

Art Unit

1731

-- Th MAILING DATE of this communication appears on the cover sheet with th correspond nce address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1731

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohri et al. (5,672,554) in view of either one of Huang (4,919,868) or Ali et al. (5,688,450) for the reasons as set forth in the previous office action.

4. Applicant's arguments filed 9/4/01 have been fully considered but they are not persuasive.

With respect to the rejection under 35 USC 103 applicants argue:

One of ordinary skill in the art would not have been lead to combining the teaching of these references with Mohri et al. because they do not relate to the same art.

Art Unit: 1731

This argument is not persuasive. All of these references relate to ceramic materials, more specifically they all disclose mixing slurries of ceramic materials. Thus, they are all relate to the same art, i.e. the art of mixing ceramic slurries.

The statement in Mohri et al. that conventional mixing can be used refers to conventional methods of mixing alumina slurries. Mohri et al. describe two such methods, namely ball mill a vibration mill, each of which involves grinding. Applicants submit that it was not conventional to mix alpha alumina by ultrasonic mixing.

This argument is not persuasive. Note that arguments of counsel cannot take place of evidence in the record. In re Pearson, 494 F.2d 1399, 1405, 181 USPQ 641,646 (CCPA 1974). Further, disclosed examples : preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiment. In re Susi, 169 USPQ 423 (CCPA 1971). Thus, Mohri et al.'s disclosure of two specific mixing processes do not limit the broad statement that mixing can be carried out in a conventional manner.

Even if Huang discloses ultrasonic irradiation to reduce the formation of agglomerates, it does not mean that it is obvious to replace the mixing methods using the grinding media in Mohri et al. with the ultrasonic mixing technique of Huang because Huang does not disclose or teach the alumina powder of the present invention that contains small amounts of agglomerates and has a uniform particle shape and particle size recited in claim 1. Further, Huang merely discloses the use of an ultrasonic mixer.

This argument is not persuasive. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. In re Keller 208 USPQ 871, 881; In re Sernaker 217 USPQ 1. It is maintained that the combined teachings of the references would have suggested to those of ordinary skill in the art that the mixing technique of Huang could be used in the process of Mohri et al. Huang was not cited to teach the materials, but rather a mixing method. The primary reference calls for conventional mixing, not grinding. Huang clearly teaches a mixing technique.

Art Unit: 1731

Applicants submit that the examiner misunderstands the recitations of the present claims. According to the present invention, the particles having substantially no fractures surfaces are the alumina powder as a raw material, and are not particles that have been mixed or milled in the steps that occur after the of preparing the slurry. Thus, it is irrelevant whether some particles are unchanged during mixing or milling.

One of the features of the present invention is to use alumina powder comprising polyhedral particles having substantially no fractured surface. The alumina powder employed in the present invention may include polyhedral powders having substantially no fractured surface. The presence of a single particle having substantially no fractured surface would not satisfy the recitations of the present claims.

By using such specific alumina powder as set forth in claim 1, applicants can achieve the present invention.

This argument is not persuasive. Mohri et al. discloses at cols. 4-5 a method of preparing the alumina powder use in the process. Mohri et al. discloses that after these powders are prepared there may be some instances where the powders are subjected to simple grinding (col. 5, line 35). This refers to the powder before the slurry is prepared.

The fact that Mohri et al. disclose an alumina purity of not less than 99.95% by weight does not mean that Mohri et al. suggest a purity of 99.99% by weight. The powder purity levels disclosed in Mohri et al. encompasses the claimed range, but Mohri et al. do not suggest a purity of 99.99% or more as claimed in the present invention.

This argument is not persuasive. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

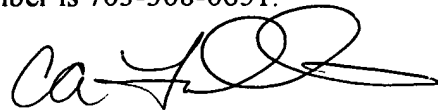
Art Unit: 1731

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is 703-308-0674. The examiner can normally be reached on M-F, 6:30am-3:00pm, but works a flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



Christopher A. Fiorilla
Primary Examiner
Art Unit 1731

caf
November 16, 2001